H. TABOR.

GOVERNOR FOR STEAM-ENGINES

No. 191,084. Patented May 22, 1877.

Fig. 1

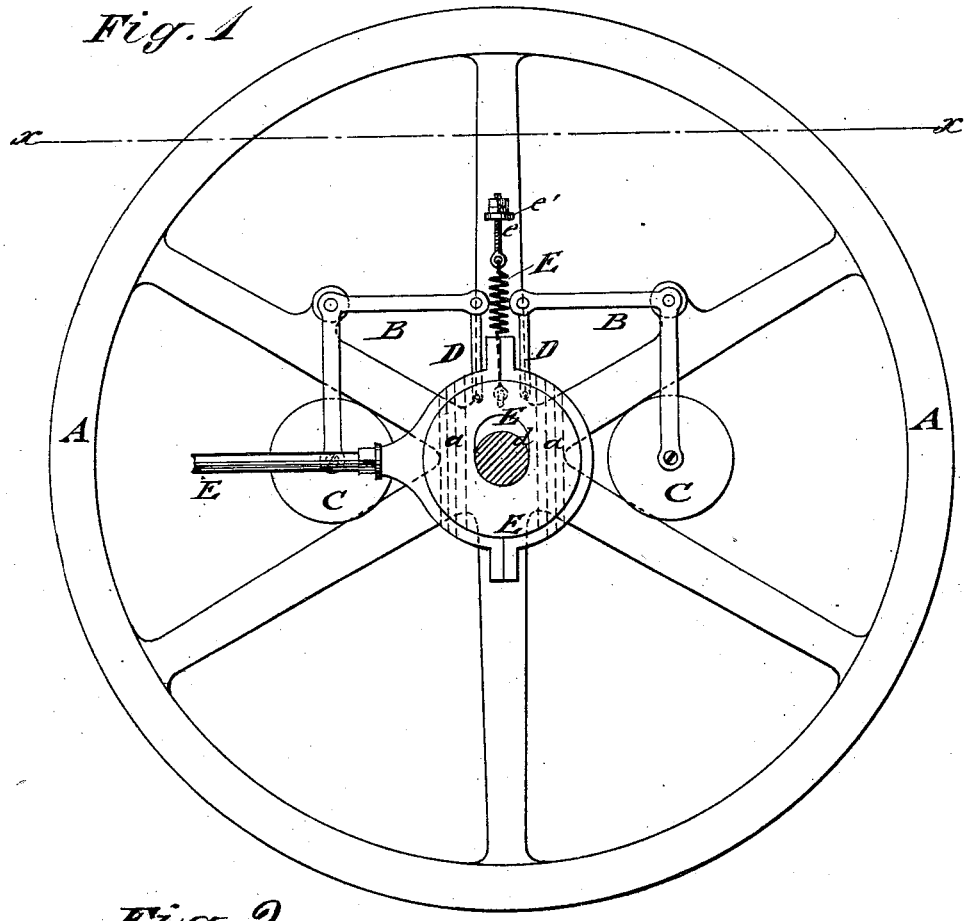
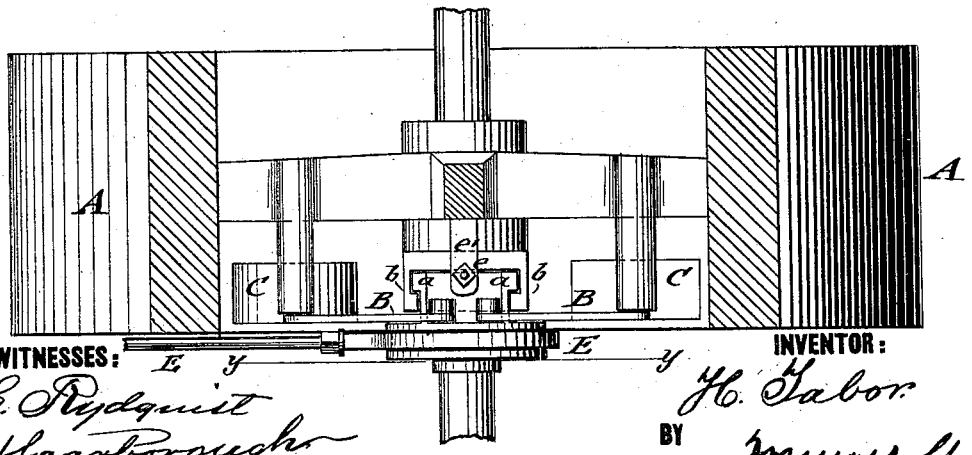


Fig. 2.



WITNESSES:

H. Rydquist

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INVENTOR:

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BY

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UNITED STATES PATENT OFFICE.

HARRIS TABOR, OF CORNING, NEW YORK, ASSIGNOR TO B. W. PAYNE & SON, OF SAME PLACE.

IMPROVEMENT IN GOVERNORS FOR STEAM-ENGINES.

Specification forming part of Letters Patent No. **191,084**, dated May 22, 1877; application filed March 24, 1877.

To all whom it may concern:

Be it known that I, HARRIS TABOR, of Corning, in the county of Steuben and State of New York, have invented a new and Improved Governor, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a front view, and Fig. 2 a top view, partly in horizontal section, on line *x x*, Fig. 1, of my improved governor for steam-engines.

Similar letters of reference indicate corresponding parts.

The invention relates to an improved governor for steam-engines, which acts in the customary manner when applied to an engine with single valves, and as an automatic cut-off.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

In the drawing, A represents the fly-wheel, to the arms of which are fulcrumed elbow-levers B, that carry at their outer ends weights C, and which are applied at the inner adjoining ends, by pivot-links D, to an eccentric, E. The hub of the eccentric E is guided by slides *a* on one side, in correspondingly-grooved rails *b*, attached to the hub of the balance-wheel or otherwise, as desired.

Either the guide-rails or slides may be made adjustable, to provide for taking up the wear.

The eccentric E has a slot, *d*, of such length as to permit of sufficient lateral motion to eccentric to prevent the valve from opening at the minimum throw. A spiral spring, E, is also attached to the eccentric E between the links D, the other end of the spring being fastened by a screw, *e*, which passes through a lug, *e'*, on one of the arms of balance-wheel, and adjusted by jam-nuts, by means of which the tension of the spring is increased or diminished, and thereby the speed of the engine changed.

When the speed increases over that required by the tension-spring the weights are thrown out by centrifugal force, and the eccentric moved across the shaft, thereby reducing the travel of the valve until the engine is brought back to its former speed.

If there is a tendency to decrease the speed the spring draws the eccentric in opposite direction, so as to impart a longer stroke to the valve and re-establish the required speed.

The joint action of the tension-spring and weighted levers on the sliding eccentric serves to keep up the uniform motion of the engine, according to the degree of speed to which the spring has been adjusted.

Thus, a simple and reliable governor-construction for steam-engines is obtained, that admits the running of the same at any desired speed and in uniform manner.

In place of applying the governor to the hub of the balance-wheel, it may be attached to a separate disk on the crank-shaft, if desired.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with balance-wheel, eccentric, and links D, of the spiral spring, arranged between links, and attached directly to the eccentric at one end, and to balance-wheel at the other, as shown and described, in order that lost motion may be avoided by dispensing with a yoke or other intermediate connection.

HARRIS TABOR.

Witnesses:

ELLSWORTH D. MILLS,

DAVID W. PAYNE.